R&D Selection Methods

for New Materials and Processes

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Automotive R&D in New Materials / Processes

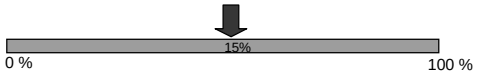
- Why do OEMS and suppliers support R&D?
  - Creating Profit Surplus
  - Medium to long term view
- Methods to Create Profit Surplus through new Materials and Manufacturing Processes
  - Lower cost production through process innovation
  - Raising market demand curve through marketable performance enhancement

R&D Portfolio Planning

Technical Risk:

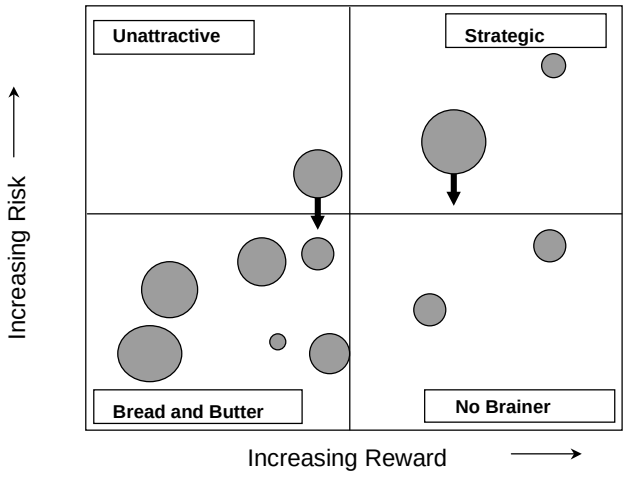
Market Risk:

Potential Reward:

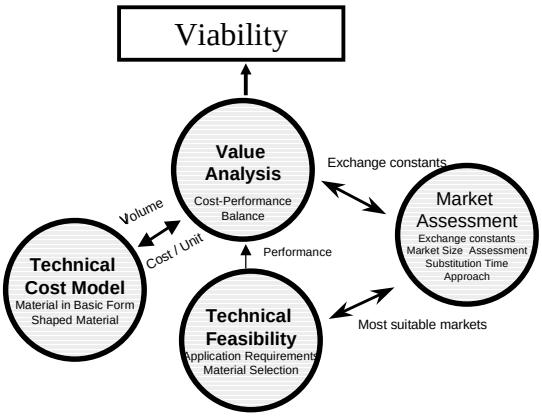


Competitive Position:

Risk / Reward Balance

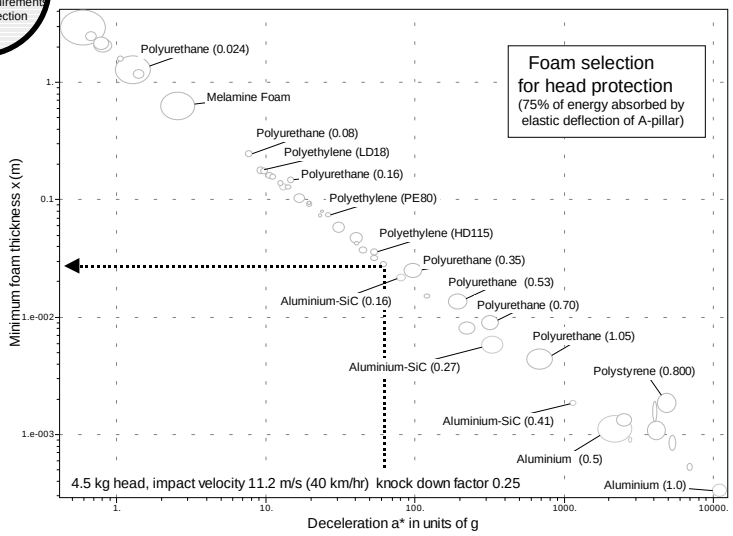


Selection of Automotive Materials R&D Projects



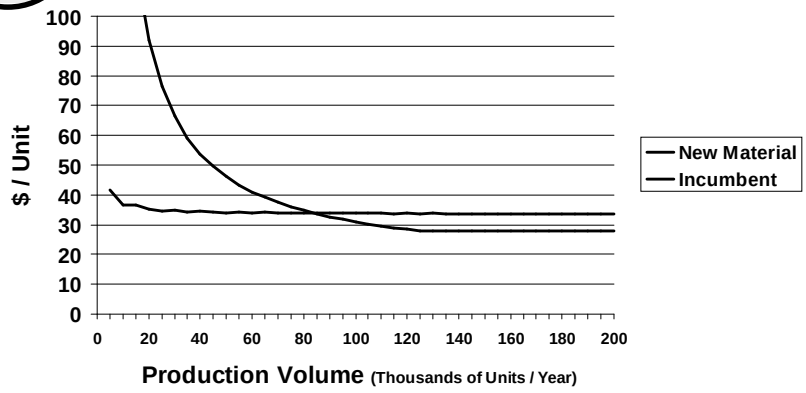
- Grasp opportunity!
- Lower risk by systematically assessing project at an early stage
- Method to provide communication between Marketing and R&D

Performance Enhancements



Forecasting Cost / Unit

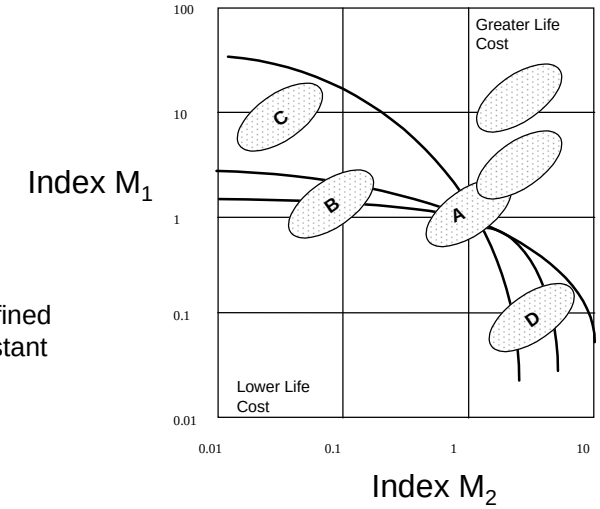
Technical Cost Model
Material in Basic Form
Shaped Material



Performance Cost Trade off

Value Analysis
Cost-Performance Balance

Tradeoff Curve defined by Exchange Constant



R&D Selection Conclusions

- Better way to Assess New Materials and Processes for Automotive R&D
  - Differentiation
  - Lower Costs
- Material Suppliers and Industry Consortiums are ALL going to tout their material
  - Need for in house assessment and prioritisation
  - OR standardised methods